REMARKS

In the Office Action mailed March 17, 2009, claim 24 was objected to.

Claims 11-32 were rejected under §103 for alleged obviousness based upon WO 02/38686 to Maze et al. in view of US 2004/0062873 to Jung et al. The Examiner also rejected previously added claims 39-41, 43-51 and 53-57 on this same ground.

Claim 42 was rejected under §103 for alleged obviousness based upon Maze et al. in view of Jung et al. and further in view of US 5,399,210 to Miller.

Claim 52 was rejected under §103 for alleged obviousness based upon Maze et al. and Jung et al. and further in view of US Patent 5,250,325 to Phillips et al.

Applicant appreciates the careful and thoughtful review by the Examiner. It is respectfully submitted that in view of the clarifications presented herein that all pending claims 11-13, 15, 16, 18-21, 23-24, 26-32, 39-45, 47-49, and 51-62 are in condition for allowance.

A. Objection to Claim 24 Has Been Remedied

Claim 24 has been amended to depend from independent claim 11. It is submitted that the objection has been remedied and should now be withdrawn.

B. Rejection of Claims 11-32, 39-41, 43-51, and 53-57 Should Be Withdrawn

The Examiner alleged that claims 11 to 32 are obvious over Maze et al. in view of Jung et al. Claims 39-41, 43-51, and 53-57 were also rejected on this ground.

Only one independent claim is currently pending, claim 11. And, of the rejected claims 14, 17, 22, 25, 46, and 50 were cancelled and so their rejection is moot. Thus,

with regard to the present rejection, the claims at issue are independent claim 11 and dependent claims 12-13, 15-16, 18-21, 23-24, 26-32, 39-45, 47-49, 51, and 53-57.

Jung et al. (US 2004/0062873) disclose a paint-like coating comprising a) at least one organic film former containing at least one water-soluble or water-dispersed polymer with an acid value of 5 to 200; b) at least one inorganic compound in particle form; and c) at least one lubricant and/or at least one anti-corrosion agent.

Numerous differences exist between the recited anticorrosion composition according to the pending claims and the paint-like coating described in US 2004/0062873 to Jung et al.

The binder in the claimed composition comprises an alkoxylated silane which requires a long baking time, such as 25 minutes, with a peak metal temperature (PMT) of 300°C. See for example, page 7, lines 15-18 of the application.[1] In contrast, in US 2004/0062873, Jung et al. note the baking is a "flash" baking, typically about 1 minute. See paragraph [0257].

In addition, Al and Zn are used in US 2004/0062873 in particle form of less than 1 μm, preferably in the range of 0.005 to 0.2 μm. See for example, paragraph [0099]. In contrast, the claimed composition comprises a particulate metal ranging from more than 1 μm (for example in the form of flakes). See for example, p. 3, lines 1-3, and lines 30-31, and claims 59 and 61.

[1] Published as WO 2005/005559.

Furthermore, the particulate metal of the claimed composition is not in the form of oxide or salt. See p. 4, lines 20-29. In contrast, Jung et al. describe the use of numerous oxides of particulate metals, see [0099] for example.

In these conditions, the particulate metal of the claimed composition can play a role of sacrificial protection.

Thus, the '873 document to Jung et al. is directed to an anticorrosion system that is very different from the anticorrosion system according to the claims at issue which uses a particulate metal which sacrifices itself in favor of the metal parts to be protected.

Al and Zn are used in US 2004/0062873 to Jung et al. in a particle size that is too small for the particles to sacrifice themselves in favor of the metal parts to be protected

Maze et al. (WO 02/38686) disclose an anticorrosion coating composition comprising at least one particulate metal, an organic solvent, a thickener, a silane-based binder, molybdenum oxide and water.

The differences between the subject matter of independent claim 11 and the '686 document to Maze et al. include the following.

Claim 11 calls for a reinforcing agent for the anticorrosion properties of the composition selected from the group consisting of yttrium, zirconium, lanthanum, cerium, praseodymium and neodymium, in the form of oxides or salts. Maze entirely fails to teach or describe any of these particular agents.

And in another aspect of the claimed invention, the composition is free of water. See for example p. 2, lines 4-5 and 25; p. 4, lines 19-18; and col. 5, lines 28-29. In contrast, Maze et al. teaches that the compositions include water.

The '873 publication to Jung fails to remedy the differences between the pending claims and the teachings by Maze. Yttrium, cerium, lanthanum and zirconium are used in US 2004/0062873 to Jung but as a load and not as a corrosion inhibitor, see [0043] for example.

The '873 document to Jung et al. does not suggest the two specific choices of yttrium, zirconium, lanthanum, cerium, praseodymium or neodymium, in the form of oxides or salts, in order to increase the anticorrosion properties of the composition of the document Maze et al. Specifically, Jung et al. fail to describe increasing the anticorrosion properties of a system using sacrificial protection by a particulate metal.

In conclusion, a person of ordinary skill in the art would not have been motivated by the '873 document to Jung et al. to prepare an anticorrosion coating composition as recited in the claims at issue.

Furthermore, the present application includes extensive evidence as to the synergistic effect of the various claimed components. For example, the corrosion tests described beginning on page 8 of the application illustrate the beneficial effects of adding yttrium oxide to coating compositions in order to increase resistance to salt spray. Extensive additional evidence as to the benefits of incorporating various oxides of the several reinforcing agents claimed herein are noted in Tables 9-11 and the related discussion in the application. Moreover, a synergistic effect is demonstrated arising from the combination of yttrium oxide as a reinforcing agent and molybdenum

oxide, see for example Table 2 on page 9. Moreover, further results are presented as to the significant and unexpected resistance to salt spray provided by a combination of a salt of yttrium, i.e. yttrium carbonate, and molybdenum oxide in Table 8 on p. 12.

Jung entirely fails to recognize any benefits from using any of the claimed reinforcing agents. Instead, Jung merely includes several of these in a long listing that Jung characterizes as representative inorganic compounds. Thus, Jung fails to recognize the unique properties of the claimed reinforcing agents, and also fails to recognize the benefits resulting from incorporation of these recited agents in an anticorrosion composition. In further support of this fact, it will be noted that Jung equates his mention of "lanthanum," "yttrium," and "yttrium oxide" with one or more compounds of aluminum, calcium, or other commonly used materials, see [0043]. That is, Jung makes no distinction between any of his numerous inorganic compounds. Therefore, it will be appreciated that Jung in fact, does not recognize any beneficial results from using the particular claimed reinforcing agents.

In addition, Jung entirely fails to teach, describe or recognize in any manner that synergistic results occur from using the claimed reinforcing agents in combination with molybdenum oxide. For at least this reason, claims 12, 13, 21, 30-32, 44, 45 and 57 are all allowable over Maze and Jung.

Since claim 11 is believed to be patentable over the limited teachings of Jung et al. and Maze et al., so too are claims 12, 13, 15, 16, 18-21, 23, 24, 26-32, 39-41, 43-45, 47-49, 51, and 53-57, which depend or ultimately depend from claim 11.

C. Rejection of Claim 42 Should be Withdrawn

Claim 42 is dependent from claims 19 and 11 and recites that the reinforcing agent used in the composition of claim 11 is cerium chloride.

In support of this ground of rejection, the Examiner identified a disclosure of cerium chloride in the '210 patent to Miller and combined that with the previously discussed references to Jung and Maze.

Notwithstanding the unknown consequences of combining the teachings of Miller as to the use of an acidic aqueous solution of cerium chloride and potassium permanganate with the previously described compositions of Jung and Maze, it must first be recognized that Miller fails to remedy the numerous shortcomings of Jung and Maze. Therefore, since independent claim 11 is patentable over Jung, Maze, and Miller, so too is claim 42 which ultimately depends therefrom.

Moreover, the present application includes evidence as to the surprising and unexpected benefits of using cerium chloride in a coating composition, and how this compound significantly increases resistance to salt spray. See for example, Table 6 on p. 11 and accompanying discussion.

In view of the foregoing, it will be appreciated that the present rejection should be withdrawn.

D. Rejection of Claim 52 Should be Withdrawn

Claim 52 is dependent from claim 11 and recites that the binder is associated with a phenolic crosslinking agent or an aminoplastic crosslinking agent.

For this ground of rejection, US Patent 5,250,325 to Phillips et al. was cited for its mention of various compounds argued by the Examiner to teach a phenolic crosslinking agent or an aminoplastic crosslinking agent. However, claim 52 depends from independent claim 11. As previously explained herein, neither Jung nor Maze teach or describe the particular features and combinations of features recited in independent claim 11. No explanation was provided in support of the present rejection as to how Phillips remedies the deficiencies of the references to Jung and Maze. Therefore, since claim 11 is submitted to be patentable over the collection of Jung, Maze, and Phillips so too is claim 52 dependent therefrom.

E. New Claims 58-62

New claims 58-62 are presented for the Examiner's consideration. Each of these claims is a dependent claim from claim 11. No new matter is added by any of these claims since support is found throughout the present application as filed. Specifically, new claim 58 finds support from previously filed claim 3, new claim 59 finds support from previously filed claim 5, new claim 60 finds support from previously claim 8, and new claim 61 finds support from previously filed claim 9. New claim 62 finds support in originally filed claim 1. Jung nor any of the other art cited by the Examiner teach the particular agents recited in that claim.

F. Conclusion

In view of the foregoing, it is respectfully submitted that all pending claims 11-13, 15-16, 18-21, 23-24, 26-32, 39-45, 47-49, and 51-62 are in condition for allowance.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. CRE-17902.

Respectfully submitted,

RANKIN, HILL & CLARK LLP

By /Mark E. Bandy/
Mark E. Bandy, Reg. No. 35788

38210 Glenn Avenue
Willoughby, Ohio 44094-7808
(216) 566-9700